

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations SDS ID: 2317106

Issue date: 8/7/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Penten-3-one
CAS-No. : 1629-58-9
Product code : 2317-1-06
Formula : C5H8O

Synonyms : Ethyl vinyl ketone; Pent-1-en-3-one; 1-Penten-3-one

Other means of identification : MFCD00009316

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory chemicals

Manufacture of substances

Scientific research and development

1.3. Supplier

SynQuest Laboratories, Inc. Inc.

P.O. Box 309

Alachua, FL, Alachua, 32615 United States of America

T (386) 462-0788 - F (386) 462-7097

info@synquestlabs.com - www.synquestlabs.com

1.4. Emergency telephone number

Emergency number : (844) 523-4086 (3E Company - Account 10069)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2 H225 Highly flammable liquid and vapor Acute toxicity (oral) Category 3 H301 Toxic if swallowed

Acute toxicity (drain) Category 3 H311 Toxic in contact with skin

Acute toxicity (inhalation) Category 3 H331 Toxic if inhaled

Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage

Serious eye damage/eye irritation Category 1 H318 Causes serious eye damage

Carcinogenicity Category 1A H350 May cause cancer

Specific target organ toxicity - Single exposure, Category 3, H335 May cause respiratory irritation

Respiratory tract irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)











Signal word (GHS US) : Danger

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Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor

H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage H335 - May cause respiratory irritation

H350 - May cause cancer

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 - Keep container tightly closed.

P240 - Ground/Bond container and receiving equipment.

P241 - Use explosion-proof electrical/ventilating/lighting equipment

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P260 - Do not breathe fumes, mist, spray, vapors.

P264 - Wash skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 - If swallowed: Immediately call a poison center or doctor.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P302+P352 - If on skin: Wash with plenty of soap and water

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a POISON CENTER or doctor/ physician

P311 - Call a POISON CENTER or doctor/physician

P321 - Specific treatment (see supplemental first aid instructions on this label)

P322 - Specific treatment (see supplemental first aid instruction on this label)

P330 - Rinse mouth.

P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.

P363 - Wash contaminated clothing before reuse.

P370+P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

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Name	Product identifier	%	GHS US classification
Penten-3-one (Main constituent)	CAS-No.: 1629-58-9		Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Carc. 1A, H350 STOT SE 3, H335

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general :	In case of accident or if you feel unwell, seek medical advice immediately (show the label wher
	possible). Move the affected personnel away from the contaminated area.

First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing. Get immediate medical advice/attention

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: The most important known symptoms and effects are described in the labelling (see section 2.2)	
	and/or in section 11.	

Symptoms/effects after inhalation : Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Thermal decomposition generates: Carbon oxides.

Explosion hazard : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers. May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

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Protection during firefighting

General measures

: Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

: Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes,

vapor or spray.

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer

to section 8: "Exposure controls/personal protection".

Emergency procedures : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground

level. Consider the risk of potentially explosive atmospheres. Eliminate every possible source of

ignition.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Dike for recovery or absorb with appropriate material. Methods for cleaning up : Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion-

proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into

appropriate container for disposal. Ventilate area.

Other information : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

: Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from ignition sources

(including static discharges). Proper grounding procedures to avoid static electricity should be

followed. Use only non-sparking tools.

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or Hygiene measures

smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use. Keep away from ignition sources. Air sensitive. Moisture

sensitive. Keep contents under inert gas.

Incompatible materials : Refer to Section 10 on Incompatible Materials.

: Store in dry, well-ventilated area. Storage area

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Penten-3-one (1629-58-9)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls

: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

protective gloves. 29 CFR 1910.138: Hand Protection

Eye protection:

Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection

Personal protective equipment symbol(s):









Other information:

Safety shoes. 29 CFR 1910.136: Foot Protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : No data available Odor : No data available : No data available Odor threshold : No data available pН Melting point : No data available Freezing point : No data available : 103 - 104 °C Boiling point : 14 °C Flash point

Relative evaporation rate (butyl acetate=1)

Flammability (solid, gas)

Vapor pressure

Relative vapor density at 20 °C

Relative density

Density

Molecular mass

Relative evaporation rate (butyl acetate=1)

No data available

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Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available Auto-ignition temperature : No data available Decomposition temperature : No data available Viscosity, kinematic : No data available : No data available Viscosity, dynamic : No data available **Explosion limits** Explosive properties No data available Oxidizing properties : No data available

9.2. Other information

Refractive index : 1.42 (@ 20 °C)

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions. Stabilized product: BHT.

10.3. Possibility of hazardous reactions

May polymerize.

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.

Acute toxicity (dermal) : Toxic in contact with skin.

Acute toxicity (inhalation) : Toxic if inhaled.

Skin corrosion/irritation : Causes severe skin burns.
Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.
Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

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Symptoms/effects : The most important known symptoms and effects are described in the labelling (see section 2.2)

and/or in section 11.

Symptoms/effects after inhalation : Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough,

shortness of breath, headache, nausea.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods

: Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.

Product/Packaging disposal recommendations

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information

: Recycle the material as far as possible.

SECTION 14: Transport information

14.1. UN number

DOT NA No : UN3286 UN-No. (TDG) : UN3286 UN-No. (IMDG) : 3286 UN-No. (IATA) : 3286

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Flammable liquid, toxic, corrosive, n.o.s.

Proper Shipping Name (TDG) : FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.

Proper Shipping Name (IATA) : Flammable liquid, toxic, corrosive, n.o.s.

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3 (6.1, 8) Hazard labels (DOT) : 3, 6.1, 8

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TDG

Transport hazard class(es) (TDG) : 3 (6.1) Hazard labels (TDG) : 3, 6.1



IMDG

Transport hazard class(es) (IMDG) : 3 (6.1, 8) Hazard labels (IMDG) : 3, 6.1, 8



IATA

Transport hazard class(es) (IATA) : 3 (6.1, 8) Hazard labels (IATA) : 3, 6.1, 8



14.4. Packing group

Packing group (DOT) : II
Packing group (TDG) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN3286

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: 5 L

DOT Special Provisions (49 CFR 172.102)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP13 - Self-contained breathing apparatus must be provided when this hazardous material is transported by sea.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 243
DOT Quantity Limitations Passenger aircraft/rail (49 : 1 L

CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49

CFR 175.75)

DOT Vessel Stowage Location

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other

: 21 - Segregation same as for flammable liquids,40 - Stow "clear of living quarters",100 - Stow "away from" flammable solids

TDG

UN-No. (TDG) : UN3286

TDG Special Provisions

: 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4, Dangerous Goods Safety Marks.

2) subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical: a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act".

Explosive Limit and Limited Quantity Index : 1 L
Excepted quantities (TDG) : E2
Passenger Carrying Road Vehicle or Passenger : 1 L
Carrying Railway Vehicle Index
Emergency Response Guide (ERG) Number : 131

IMDG

Special provision (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001

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IBC packing instructions (IMDG) : IBC99
Tank instructions (IMDG) : T11

Tank special provisions (IMDG) : TP2, TP13, TP27

EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS EmS-No. (Spillage) : S-C - SPILLAGE SCHEDULE Charlie - FLAMMABLE CORROSIVE LIQUIDS

Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Segregation (IMDG) : SG5, SG8

Properties and observations (IMDG) : Flammable, toxic, corrosive liquid. Toxic if swallowed, by skin contact or by inhalation. Causes

burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA) : E2 PCA Limited quantities (IATA) : Y340 PCA limited quantity max net quantity (IATA) : 0.5L PCA packing instructions (IATA) : 352 PCA max net quantity (IATA) : 1L CAO packing instructions (IATA) : 363 CAO max net quantity (IATA) : 5L ERG code (IATA) : 3CP

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

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15.2. International regulations

CANADA

Penten-3-one (1629-58-9)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Penten-3-one (1629-58-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Penten-3-one (1629-58-9)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on the NCI (Vietnam - National Chemical Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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Full text of H-	Full text of H-phrases	
H225	Highly flammable liquid and vapor	
H301	Toxic if swallowed	
H311	Toxic in contact with skin	
H314	Causes severe skin burns and eye damage	
H318	Causes serious eye damage	
H331	Toxic if inhaled	
H335	May cause respiratory irritation	
H350	May cause cancer	

NFPA health hazard

: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Hazard Rating

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Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F

but below 200 F. (Classes II IIIA)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous

polymerization in the absence of inhibitors.

Safety Data Sheet (SDS), USA

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.